CODING ARENA PROJECT

Problem Definition
The aim of this project is to design a website to host and manage a time restricted coding challenge. It should allow admins to post a new challenge and allow registered users to participate in a fair manner. It also needs to have infrastructure to allow automatic test case evaluations and posting scores based on time taken to submit and results from the test suites. Participants can use their creativity to create scores for this.

Basic Feature set of the website:
- User signup
- User authentication
  This can be either implemented on your own or you can think of integrating currently available services
- Contest platform
  This view will allow users to participate in the contest. The user should be able to upload code, compile, submit and unit-test using pre-defined test cases or manually input some cases.
- Coding Contest page
  This view must allow Admin to create a new challenge easily.
- Evaluation
  Automatic evaluation based on stored test cases and time taken by the candidate
- Result/Evaluation view
  This view will allow all users to analyze how they have performed with respect to others and also allow analyze competitor's code/time taken/etc. after the contest
- Chat client
  - Inbox
  - Sent
  - Chat window
  Participants should be allowed to chat before and after the challenge only. Sending/Receiving offline messages should be made possible

Roles
- Participant
  - Participate in challenge and able to compile/submit/run test cases for the problem
  - View evaluations/results of previous contests
  - Practice previous contests in the arena
  - Chat with other participants and admin
- Admin
  - Create a new challenge
  - Ability to add/remove any user
  - Ability to reset password if authentication is self-implemented
  - The admin should NOT be able to access chat messages

Good to have features on the website:
These features are good to have and may not necessarily be implemented. Teams can choose from the list described or on their own to distinguish their projects from others
- Embed code editor allowing users to code right away
- Support multiple languages
- Points system to maintain rankings of the participants across contests
- Email notifications
- Any other creative ideas!